

CLAIMS:

1. An amphipathic copolymer comprising one or more S portions and one or more D portions, the amphipathic copolymer having a chromophore covalently bonded thereto
5 via a urethane, urea or amide linkage.
2. The amphipathic copolymer of claim 1, wherein the chromophore is covalently bonded to the amphipathic copolymer via a urethane linkage.
- 10 3. The amphipathic copolymer of claim 1, wherein the chromophore is covalently bonded to the amphipathic copolymer via a urea linkage.
4. The amphipathic copolymer of claim 1, wherein the chromophore is covalently bonded to the amphipathic copolymer via an amide linkage.
- 15 5. The amphipathic copolymer of claim 1, wherein the chromophore is covalently bonded to the S portion of the amphipathic copolymer.
6. The amphipathic copolymer of claim 1, wherein the chromophore is covalently
20 bonded to the D portion of the amphipathic copolymer.
7. The amphipathic copolymer of claim 1, wherein a single color of chromophore is covalently bonded to the copolymer to provide a predetermined color.
- 25 8. The amphipathic copolymer of claim 1, wherein a plurality of chromophores having different colors are covalently bonded to the copolymer to provide a predetermined blended color.
9. A toner composition comprising a plurality of amphipathic copolymers of claim
30 1.

10. The toner composition of claim 9, said composition being substantially free of pigment.
11. A toner composition comprising a plurality of amphipathic copolymers of claim 7
5 in a predetermined ratio to provide a toner composition having a predetermined blended color.
12. A toner composition comprising a plurality of amphipathic copolymers of claim 1, the composition comprising a plurality of covalently bonded chromophores having
10 different colors in a predetermined ratio to provide a toner composition having a predetermined blended color.
13. A liquid electrophotographic toner composition comprising:
a) a liquid carrier having a Kauri-butanol number less than 30 mL; and
15 b) a plurality of toner particles dispersed in the liquid carrier, wherein the toner particles comprise polymeric binder comprising at least one amphipathic copolymer of claim 1.
14. A method of making an amphipathic copolymer comprising at least one
20 covalently bonded chromophore, comprising the steps of:
a) providing a plurality of free radically polymerizable monomers, wherein at least one of the monomers comprises a first reactive functionality;
b) free radically polymerizing the monomers in a solvent to form a first reactive functional polymer, wherein the monomers and the first reactive functional
25 polymer are soluble in the solvent;
c) reacting a compound having a second reactive functionality that is reactive with the first reactive functionality and also having free radically polymerizable functionality with the first reactive functional polymer under conditions such that at least a portion of the second reactive functionality of the compound reacts with at least a
30 portion of the first reactive functionality of the polymer to form one or more linkages by

which the compound is linked to the polymer, thereby providing an S material portion polymer with pendant free radically polymerizable functionality;

d) copolymerizing ingredients comprising (i) the S material portion polymer with pendant free radically polymerizable functionality, (ii) one or more free radically polymerizable monomers, (iii) a chromophore comprising a third reactive functionality, and (iv) liquid carrier in which polymeric material derived from ingredients comprising the one or more additional monomers of ingredient (ii) is insoluble;

wherein at least one of the ingredients (i) and (ii) comprises available fourth reactive functionality;

wherein one of the third and fourth reactive functionalities is an isocyanate functionality, and the other of the third and fourth reactive functionalities is selected from the group consisting of hydroxyl, amino, carboxyl or mixtures thereof; and wherein

the copolymerizing occurs under conditions effective to form an amphipathic copolymer having S and D portions and a chromophore covalently bonded thereto via a urethane, urea or amide linkage.

15. The method of claim 14, wherein the chromophore is covalently bonded to the amphipathic copolymer via a urethane linkage.

16. The method of claim 14, wherein the chromophore is covalently bonded to the amphipathic copolymer via a urea linkage.

17. The method of claim 14, wherein the chromophore is covalently bonded to the amphipathic copolymer via an amide linkage.

18. The method of claim 14, wherein the third reactive functionality is isocyanate, and the fourth reactive functionality is selected from hydroxyl, amino, and carboxyl functionalities, and mixtures thereof.

19. The method of claim 14, wherein the third reactive functionality is isocyanate, and the fourth reactive functionality is hydroxyl.

20. The method of claim 14, wherein the third reactive functionality is selected from hydroxyl, amino, and carboxyl functionalities, and mixtures thereof, and the fourth reactive functionality is isocyanate.

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21. The method of claim 14, wherein the first reactive functionality is selected from hydroxyl, amino, and carboxyl functionalities, and mixtures thereof, and the second reactive functionality is selected from isocyanate and epoxy functionalities.

10 22. The method of claim 14, wherein the first reactive functionality is a hydroxyl functionality, and the second reactive functionality is an isocyanate functionality.

23. The method of claim 14, wherein the first reactive functionality is selected from isocyanate and epoxy functionalities, and the second reactive functionality is selected
15 from hydroxyl, amino, and carboxyl functionalities, and mixtures thereof.

24. The method of claim 14, wherein the chromophore is covalently bonded to the S portion of the amphipathic copolymer.

20 25. The method of claim 14, wherein the chromophore is covalently bonded to the D portion of the amphipathic copolymer.

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